



Star Primary School Science policy

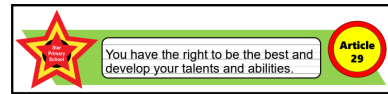
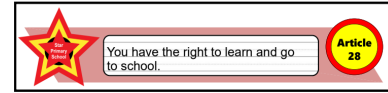
School Mission Statement:

At Star Primary School we believe that everyone is equally loved and accepted.

Acknowledging the diversity of our community, we...

- *Provide a broad and balance curriculum encouraging every child to take the opportunity to achieve their full potential;*
- *Nurture positive home, school and community relationships;*
- *Promote tolerance and respect for all people and the world we live in.*

Science Policy



Intent

We have high expectations and promote a love for Science through our rights based topic curriculum. Children develop and use a range of life important and transferable science skills including observing, planning and investigating. They question the world around them to become conscientious and independent scientific learners.

We strive for our pupils to acquire skills, knowledge and conceptual understanding which will support them to think scientifically, gain an understanding of scientific processes, as well as an understanding of Science in everyday life.

We use the National Curriculum alongside our progressive curriculum to ensure that substantive knowledge and disciplinary skills are taught simultaneously. Topics focus on current phenomena promoting global citizenship, enhancing engagement, enthusiasm and an independent drive for scientific learning; preparing our children to be future scientific leaders.

At Star, our children are encouraged to achieve their potential and progress with confidence to the next phase of their scientific education through our robust curriculum.

- A progressive approach to teaching ensures that lessons build on prior learning so by the time children leave KS2 they have a more sophisticated understanding of working scientifically; interwoven through the specific disciplines of biology, chemistry and physics.
- Lessons promote a sense of intrigue of the world around them through the five types of enquiry (observing over time; identifying, classifying and grouping; pattern seeking; comparative and fair testing; and problem solving). We encourage pupils to lead the learning and make independent discoveries through safe scientific enquiry.

- The science team provides specialist CPD which drives quality first teaching, resulting in children embarking on exciting and scientific learning journeys.
- Children know and are able to use the processes of collecting, presenting (observational drawings and scientific diagrams) and analysing their findings (keys bar charts and tables)
- Children can read, recognise and make sense of technical terminology enabling them to articulate concepts clearly and precisely.
- Children develop their reading skills in science through high quality texts which link closely to the National Curriculum outcomes as well as our science strands.
- Our Science Ambassadors and Eco Warriors drive a passion for Science across the school.

Impact

Pupils leave our school as confident scientists; conscientious in their questioning and dynamic thinkers. Children know what science is and the power it has to help us find the truth about our ever-changing planet. Pupils are motivated in science lessons and demonstrate a sound understanding of concepts. Our topics are current, relevant and stimulate pupils to consider the world in which they live as well as their impact on the wider environment around them. The impact and quality of our science curriculum is evidenced from our 'Gilt award' in the nationally recognised 'Primary Science Quality Mark.'

Role and Responsibilities:

The subject leader is responsible for:

- Maintaining a 'Gilt' standard of teaching and learning as per the Primary Science Quality Mark.
- Reviewing changes to the national curriculum and advising on their implementation.
- Communicating developments in the subject to all teaching staff.
- Advising on the contribution of science to other curriculum areas, including cross-curricular

and extracurricular activities.

- Monitoring the learning and teaching of science, providing support for staff where necessary.
- Encouraging staff to provide effective learning opportunities for pupils.
- Helping to develop colleagues' expertise in the subject.
- Organising the deployment of resources and carrying out an annual audit of all science resources.
- Liaising with teachers across all phases
- Leading staff meetings and providing staff members with the appropriate training.
- Organising, providing and monitoring CPD opportunities in the subject.
- Ensuring common standards are met for recording and assessment.
- Collating assessment data and setting new priorities for development of science in subsequent years.
- Ensuring the science policy is reviewed annually.

The classroom teacher is responsible for:

- Acting in accordance with Star Primary School Science Policy, ensuring that lessons are taught in line with the school's risk assessment guidance at all times.
- Liaising with the science team about key topics, resources and supporting individual pupils.
- Ensuring that all of the relevant statutory content is covered within the school year.
- Monitoring the progress of pupils in their class and reporting this on a half termly basis.
- Reporting any concerns regarding the teaching of the subject to the subject leader or the senior leadership team (SLT) lead.
- Undertaking any training that is necessary in order to effectively teach the subject.

Curriculum:

In the Early years, the 'Development Matters' scheme is followed. The area of learning 'Understanding the world' focuses on People, Communities and the World. EYFS focuses on

a hands-on approach involving exploration and investigation, allowing children to independently explore science, forming their own scientific curiosity and questioning.

The National Curriculum is followed from years 1 to 6. Science is taught on a weekly basis for an hour in KS1 and up to two hours in KS2. A progressive approach to teaching ensures that lessons build on prior learning and provide opportunities for guided and independent practice. The Science Team contributes to whole school topic overviews outlining the relevant science teaching in relation to the national curriculum inclusive of lesson ideas.

Teaching and learning:

Pupils are taught to describe associated processes and key characteristics in common language, as well as understand and use technical terminology and specialist vocabulary.

Each lesson includes two foci: one focusing on the subject knowledge, the other on the skill.

This ensures both scientific knowledge and skills are taught.

Lessons allow for a wide range of scientific enquiry, including the following:

- Questioning, predicting and interpreting
- Pattern seeking
- Practical experiences
- Collaborative work
- Carrying out investigation
- Carrying out time-controlled observations
- Classifying and grouping
- Undertaking comparative and fair testing
- Researching using secondary sources

-Opportunities for outdoor learning are provided where possible and science focused educational visits are encouraged at least once a year.

The science team is responsible for organising science days and weeks, where the whole school spends the day immersed into a scientific topic and investigation.

Planning and Provision

Science is linked into a combination of whole school topics across the key stages, linked where appropriate to other subjects to provide meaningful and purposeful opportunities to develop children's skills through a cross-curricular approach.

Planning

Snap Science is a scheme of work available to all teaching staff for guidance in planning and teaching of science lessons. The Science team has designed lessons to ensure curriculum coverage and teaching of skills. Termly topic overviews include lesson outlines for teachers as the progression of skills providing teachers with a clear understanding of previous learning as well as the next steps in their learning journey. This is used to ensure practitioners have knowledge of previous learning.

Marking

At least two pieces of work per child per half term must be diagnostically marked by the class teacher. Other written outcomes will be discussed through teacher conferencing and light touch marking addressing misconceptions in the moment.

Assessment:

Pupils are assessed and their progression is recorded in line with the school assessment policy. Pupils are assessed continuously through teacher questioning and from using Target Tracker statements per topic taught as well as working scientifically skills which run continuously alongside topics. This shows who is working below expectations, meeting expectations and exceeding expectations and this is reviewed by the Science Team on a termly basis.

This information is used by the teacher to form part of the child's annual report to parents.

The Science Team keeps evidence of the children's work often as a photographic record on google drive which demonstrates the expected levels of below expectations, meeting expectations and exceeding expectations in Science in each year of the school. This

portfolio shows progression within a year group as well as across the whole school. This is an ongoing project to build up a representation of progression through the skill areas. Evidence is collected for each year group on a half termly basis.

Equipment and resources:

Science Equipment is kept in a science trolley in each classroom. The Science Team are responsible for and carry out an annual audit of science resources, reordering any consumables when necessary. Class teachers must liaise with the Science team when requesting resources or equipment. The Science team is responsible for ensuring resources are bought within the amount allocated in the annual budget. Staff members must inform the Science Team of any changes regarding science resources, such as broken items or when new resources are required. Any equipment or resources which are a cause of concern must be reported to the Science Team and removed from pupil use immediately.

Inclusion

Star Primary School is committed to providing an appropriate and high quality education to all our children. We believe that **all** children have a common entitlement to a broad and balanced academic and social curriculum which is accessible to them and to be fully included in all aspects of school life and this vision is instilled deep within our science teaching.

Inclusivity:

As an inclusive school, we aim to offer excellence and choice to all our children. We recognise that we have children of differing ability in all our classes, so we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this through a range of strategies:

- the removal of barriers to learning and participation
- setting common tasks that are open-ended and can have a variety of responses
- setting tasks of increasing difficulty where not all children complete all tasks
- grouping children by ability and adapting tasks for each group

- providing a range of challenges with different resources
- using additional adults to support the work of individual children or small groups
- identifying fast grasping children in Science

Health and safety:

Health and Safety issues in Science include the storage and use of materials, and the use of tools and techniques in accordance with the Health and Safety requirements.

Children are instructed on the correct and appropriate use of all resources and are supervised during all activities. They are made aware of specific dangers and are shown the appropriate and safe way to use the equipment and materials.

The CLEAPPs website is used to inform teachers about safe ways to work scientifically. Risk Assessments must be carried out where deemed appropriate.

The 'Be Safe' book is also accessible to all teachers (written by The Association for Science Education) on health and safety matters in the teaching of Science in the classroom. Snap Science scheme of work has guidance on health and safety in the classroom and facilitates teacher's planning.

Equal Opportunities:

All children within the school regardless of race, gender, ethnicity or ability should have equal access and entitlement to a wide range of scientific skills, techniques and experiences, taking into account the individual needs of all children. This is in accordance with the school's Equal Opportunity and Inclusion Policies. Regular assessment of pupil needs and understanding plays a vital role here as does the provision of appropriate resources.

Monitoring and Review

This policy will be reviewed by the science team and SLT annually. The policy will be shared with staff and Governors (7th January 2022)

By order of the Governing Body of Star Primary School

(Signed)_____Dated

(Star)

(Signed)_____Dated

(Governor)

Policy Date: January 2022

Review Date: January 2025